

## Message

**From:** Berkoff, Michael [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=F347C01A92D7424FA840C24F6B7FBF6B-MBERKOFF]  
**Sent:** 11/21/2017 7:51:13 PM  
**To:** Acheson, Carolyn [Acheson.Carolyn@epa.gov]; McKernan, John [McKernan.John@epa.gov]; Barth, Edwin [Barth.Ed@epa.gov]  
**CC:** Gervais, Gregory [Gervais.Gregory@epa.gov]; Gilbert, Edward [Gilbert.Edward@epa.gov]  
**Subject:** RE: Tannery Sites

Would any of you guys be available for a check in tomorrow?

Thanks,  
Michael

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**From:** Acheson, Carolyn  
**Sent:** Monday, November 20, 2017 11:29 AM  
**To:** Berkoff, Michael <berkoff.michael@epa.gov>; McKernan, John <McKernan.John@epa.gov>; Barth, Edwin <Barth.Ed@epa.gov>  
**Cc:** Gervais, Gregory <Gervais.Gregory@epa.gov>; Gilbert, Edward <Gilbert.Edward@epa.gov>  
**Subject:** RE: Tannery Sites

Hi Michael,

I understand that tannery formulations could contain PFOS and the shorter molecular weight versions (PFHxS and PFBS) as well as the PFAAs (PFBA through PFDA, C4 -C10, PFOA is also called C8). In addition, because these sites were using PFAS formulations, residuals from manufacturing may also be present. These chemicals are often called precursors (to PFOA or PFOS) and include chemicals such as Fluorotelomer alcohols (FTOHs) and perfluoroalkylsulfonamides. Use of these products started in 1990s or earlier. Finally, other products used on site may include chromium, organotins, other heavy metals, and chlorinated organics.

I am attaching a paper (Liu et al) which gives an overview of PFAS information. It is a few years old, but the discussion of the precursors is good for both the PFOA and PFOS. If it would be helpful to talk about this information, you are welcome to give me a call.

On the positive side, Chicago Regional Lab (CRL) has methods to measure many PFAS in environmental media (waters, soils, sediments, sludges). So far data using these methods have been good. It may be an option depending on the data quantity and quality you are getting from site owners.

Best wishes,  
Carolyn

Carolyn Acheson, Ph.D.  
U.S Environmental Protection Agency  
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The good thing about science is that it's true whether or not you believe in it. Neil deGrasse Tyson

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**From:** Berkoff, Michael  
**Sent:** Monday, November 20, 2017 10:09 AM  
**To:** Acheson, Carolyn <[Acheson.Carolyn@epa.gov](mailto:Acheson.Carolyn@epa.gov)>; McKernan, John <[McKernan.John@epa.gov](mailto:McKernan.John@epa.gov)>; Barth, Edwin <[Barth.Ed@epa.gov](mailto:Barth.Ed@epa.gov)>

**Cc:** Gervais, Gregory <[Gervais.Gregory@epa.gov](mailto:Gervais.Gregory@epa.gov)>; Gilbert, Edward <[Gilbert.Edward@epa.gov](mailto:Gilbert.Edward@epa.gov)>  
**Subject:** RE: Tannery Sites

Wow. Thanks.

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**From:** Acheson, Carolyn  
**Sent:** Monday, November 20, 2017 9:00 AM  
**To:** Berkoff, Michael <[berkoff.michael@epa.gov](mailto:berkoff.michael@epa.gov)>; McKernan, John <[McKernan.John@epa.gov](mailto:McKernan.John@epa.gov)>; Barth, Edwin <[Barth.Ed@epa.gov](mailto:Barth.Ed@epa.gov)>  
**Cc:** Gervais, Gregory <[Gervais.Gregory@epa.gov](mailto:Gervais.Gregory@epa.gov)>; Gilbert, Edward <[Gilbert.Edward@epa.gov](mailto:Gilbert.Edward@epa.gov)>  
**Subject:** RE: Tannery Sites

Hi Michael,

Happy to help on this site. I am trying to get more information about leather tanning PFAS products.

I have heard hallway gossip about anthrax at leather tanneries. (Like you needed something else to worry about) Gossip is probably the right description - not sure that I would put much faith in it. Maybe the take home message is to consider the full range of products on such a site as you think about it.

Best wishes,  
 Carolyn

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**From:** Berkoff, Michael  
**Sent:** Friday, November 17, 2017 9:31 AM  
**To:** McKernan, John <[McKernan.John@epa.gov](mailto:McKernan.John@epa.gov)>; Barth, Edwin <[Barth.Ed@epa.gov](mailto:Barth.Ed@epa.gov)>  
**Cc:** Gervais, Gregory <[Gervais.Gregory@epa.gov](mailto:Gervais.Gregory@epa.gov)>; Gilbert, Edward <[Gilbert.Edward@epa.gov](mailto:Gilbert.Edward@epa.gov)>; Acheson, Carolyn <[Acheson.Carolyn@epa.gov](mailto:Acheson.Carolyn@epa.gov)>  
**Subject:** RE: Tannery Sites

Thank you guys. I got the site yesterday, so I will get operations information today and then get in touch with the Eds.  
 Thank you,  
 Michael

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**From:** McKernan, John  
**Sent:** Friday, November 17, 2017 8:29 AM  
**To:** Barth, Edwin <[Barth.Ed@epa.gov](mailto:Barth.Ed@epa.gov)>  
**Cc:** Berkoff, Michael <[berkoff.michael@epa.gov](mailto:berkoff.michael@epa.gov)>; Gervais, Gregory <[Gervais.Gregory@epa.gov](mailto:Gervais.Gregory@epa.gov)>; Gilbert, Edward <[Gilbert.Edward@epa.gov](mailto:Gilbert.Edward@epa.gov)>; Acheson, Carolyn <[Acheson.Carolyn@epa.gov](mailto:Acheson.Carolyn@epa.gov)>  
**Subject:** FW: Tannery Sites

Hi Ed-

Michael (in R5) has a request about tanneries! I know you have worked on these in the N.E. Can you provid3 some assistance to him?

Thanks,

John

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**From:** Gervais, Gregory  
**Sent:** Friday, November 17, 2017 8:37 AM  
**To:** Berkoff, Michael <[berkoff.michael@epa.gov](mailto:berkoff.michael@epa.gov)>  
**Cc:** Acheson, Carolyn <[Acheson.Carolyn@epa.gov](mailto:Acheson.Carolyn@epa.gov)>; McKernan, John <[McKernan.John@epa.gov](mailto:McKernan.John@epa.gov)>; Gilbert, Edward <[Gilbert.Edward@epa.gov](mailto:Gilbert.Edward@epa.gov)>  
**Subject:** Re: Tannery Sites

Michael - Sadly no Marvel connection to your site. Ed Gilbert (acting TAB branch chief) should be able to help you get what you need. Site history, especially operations dates, will be a key to determining which contaminants and processes were used and disposed. I've copied him, and his number is 703-603-8883. Thanks!

Greg Gervais  
EPA OLEM FFRRO  
202-564-4409 (w)

**Ex. 6 - Personal Privacy**

On Nov 16, 2017, at 5:08 PM, Berkoff, Michael <[berkoff.michael@epa.gov](mailto:berkoff.michael@epa.gov)> wrote:

All,  
I hope that this email finds all of you well. I was just assigned to a new not-at-this-point-an-EPA-Site site, Wolverine (I was bummed to hear that the contaminant of concern is not adamantium). I am trying to get up to speed on tannery sites. Do you guys know of any experts on tanneries? I am interested in finding out what kinds of Hazardous Substances we should expect to find at those kinds of sites (not just the PFOA and PFOS).

Thanks,  
Michael

Michael Berkoff  
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U.S. EPA Region 5  
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Remedial Response Section #3  
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